



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2011-1322; Directorate Identifier 2011-NM-211-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; The Boeing Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for all The Boeing Company Model 767 airplanes. This proposed AD was prompted by reports of cracks of the underwing longeron fittings in the wing center section which could result in loss of the primary load path between the fuselage and the wing box, and consequent catastrophic damage to the wing box and failure of the wing. This proposed AD would require repetitive high frequency eddy current (HFEC) inspections of the underwing longeron fitting for cracking, and related investigative and corrective actions if necessary. We are proposing this AD to detect and correct the unsafe condition on these products.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; phone: 206-544-5000, extension 1; fax: 206-766-5680; e-mail: [me.boecom@boeing.com](mailto:me.boecom@boeing.com); Internet: <https://www.myboeingfleet.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Berhane Alazar, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: 425-917-6577; fax: 425-917-6590; e-mail: [Berhane.Alazar@faa.gov](mailto:Berhane.Alazar@faa.gov).

### **SUPPLEMENTARY INFORMATION:**

#### **Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2011-1322; Directorate Identifier 2011-NM-211-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory,

economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

### **Discussion**

We have received three reports of cracks of the underwing longeron fittings in the wing center section. One operator reported finding cracks in the underwing longeron fittings of the left and right wing center section. The cracks found were in the same location on both fittings and appeared to run through the entire thickness of the forward edge of the fitting at the radius corner of the vertical/horizontal flange. The lengths of cracks were approximately 0.300 to 0.375 inch long. The airplane had accumulated 37,000 total flight cycles. Similar cracks were found on a fatigue test airplane at these locations. Boeing estimates that it would take 25,000 flight cycles for the cracks to grow from 0.375 inch to 1.8 inches. Another operator reported finding a crack in the underwing longeron fitting of the left wing center section during normal maintenance. The crack was approximately one inch long and started from the radius of the fitting flange. The airplane had accumulated 16,655 total flight cycles.

Such cracking, if not detected and corrected, could result in loss of the primary load path between the fuselage and the wing box, and consequent catastrophic damage to the wing box and failure of the wing.

### **Relevant Service Information**

We reviewed Boeing Alert Service Bulletin 767-57A0126, dated

August 12, 2011. This service information describes procedures for repetitive HFEC inspections to detect cracking of the underwing longeron fitting, and related investigative and corrective actions if necessary. The related investigative action is an HFEC inspection to detect cracking of the tension bolt hole and the front spar lower chord. The corrective actions include replacing the underwing longeron fitting, and contacting The Boeing Company for repair instructions and doing the repair.

The compliance times are dependent on the total number of flight hours and flight cycles accumulated on the airplane. For certain airplanes, the initial compliance time is within 3,000 flight cycles or 7,000 flight hours (whichever is first) after the date of the service bulletin. For other airplanes, the initial compliance time is the later of: (1) before 16,000 total flight cycles or 35,000 total flight hours (whichever is first), and (2) within 6,000 flight cycles or 14,000 flight hours (whichever is first) after the date of the service bulletin.

The repetitive inspection interval is 12,000 flight cycles or 28,000 flight hours (whichever is first). The first repetitive inspection for airplanes on which the underwing longeron fitting is replaced is 16,000 flight cycles or 35,000 flight hours (whichever is first) after replacement.

We have also reviewed Boeing Service Bulletin 767-57A0126, Revision 1, dated November 9, 2011 (short form revision), which changes the part number of a certain washer.

#### **FAA's Determination**

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

### **Proposed AD Requirements**

This proposed AD would require accomplishing the actions specified in the service information described previously, except as discussed under “Differences Between the Proposed AD and the Service Information.”

### **Differences Between the Proposed AD and the Service Information**

Boeing Alert Service Bulletin 767-57A0126, dated August 12, 2011, specifies to contact the manufacturer for instructions on how to repair certain conditions, but this proposed AD would require repairing those conditions in one of the following ways:

- In accordance with a method that we approve; or
- Using data that meet the certification basis of the airplane, and that have been approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) whom we have authorized to make those findings.

### **Interim Action**

We consider this proposed AD interim action. The design approval holder is currently developing a modification that will address the unsafe condition identified in this AD. Once this modification is developed, approved, and available, we might consider additional rulemaking.

### **Costs of Compliance**

We estimate that this proposed AD affects 417 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

| <b>Estimated costs</b>     |   |                   |                            |                                |
|----------------------------|---|-------------------|----------------------------|--------------------------------|
| <b>Action</b>              | <b>Labor cost</b>   | <b>Parts cost</b> | <b>Cost per product</b>    | <b>Cost on U.S. operators</b>  |
| Repetitive HFEC inspection | 3 work-hours X \$85 per hour = \$255 per inspection cycle | \$0               | \$255 per inspection cycle | \$106,335 per inspection cycle |

We estimate the following costs to do any necessary inspections and replacements that would be required based on the results of the proposed inspection. We have no way of determining the number of aircraft that might need these on-condition actions.

#### **On-condition costs**

| <b>Action</b>  | <b>Labor cost</b>                        | <b>Parts cost</b> | <b>Cost per product</b> |
|--|--|-------------------|-------------------------|
| Tension bolt hole and the front spar lower chord HFEC inspection and fitting replacement | 104 work-hours X \$85 per hour = \$8,840 | Up to \$11,551    | Up to \$20,391          |

We have received no definitive data that would enable us to provide cost estimates for cracking repairs specified in this proposed AD.

#### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency’s authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: “General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

#### **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct

effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**The Boeing Company:** Docket No. FAA-2011-1322; Directorate Identifier 2011-NM-211-AD.

#### **(a) Comments Due Date**

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all The Boeing Company Model 767-200, -300, -300F, and -400ER series airplanes; certificated in any category.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 57, Wings.

**(e) Unsafe Condition**

This AD was prompted by reports of cracks of the underwing longeron fittings in the wing center section. We are issuing this AD to detect and correct such cracking, which could result in loss of the primary load path between the fuselage and the wing box, and consequent catastrophic damage to the wing box and failure of the wing.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Inspections, Related Investigative Actions, and Corrective Actions**

Except as provided by paragraphs (h)(2) and (h)(3) of this AD, at the applicable time specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 767-57A0126, dated August 12, 2011: Do a high frequency eddy current (HFEC) inspection to detect cracking of the underwing longeron fitting; and do all applicable related investigative and corrective actions; in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 767-57A0126, dated August 12, 2011, as revised by Boeing Service Bulletin 767-57A0126, Revision 1, dated November 9, 2011 (short form revision), except as provided by paragraph (h)(1) of this AD. Do all applicable related investigative and corrective actions before further flight. Repeat the inspection of the underwing longeron fitting thereafter at the applicable time and intervals



specified in paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 767-57A0126, dated August 12, 2011.

**(h) Exceptions to Paragraph (g) of This AD**

(1) If, during accomplishment of the related investigative action required by this AD, any cracking is found, and Boeing Alert Service Bulletin 767-57A0126, dated August 12, 2011, specifies to contact Boeing for repair instructions: Before further flight, do the repair using a method approved in accordance with the procedures specified in paragraph (i) of this AD.

(2) Where Paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 767-57A0126, dated August 12, 2011, specifies a compliance time “after the original issue date of this service bulletin,” this AD requires compliance within the specified compliance time “after the effective date of this AD.”

(3) The Condition column of Paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 767-57A0126, dated August 12, 2011, refers to total flight cycles and total flight hours “as of the original issue date of this service bulletin.” However, this AD applies to the airplanes with the specified total flight cycles or total flight hours “as of the effective date of this AD.”

Note 1: The service bulletin accomplishment instructions might refer to other procedures. When the words “refer to” are used and the operator has an accepted alternative procedure, the accepted alternative procedure can be used to comply with the AD. When the words “in accordance with” are included in the instruction, the procedure in the service bulletin must be used to comply with the AD.

**(i) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal

inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD. Information may be e-mailed to: [9-ANM-Seattle-ACO-AMOC-Requests@faa.gov](mailto:9-ANM-Seattle-ACO-AMOC-Requests@faa.gov).

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

**(j) Related Information**

(1) For more information about this AD, contact Berhane Alazar, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: 425-917-6577; fax: 425-917-6590; e-mail: [Berhane.Alazar@faa.gov](mailto:Berhane.Alazar@faa.gov).

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; phone: 206-544-5000, extension 1; fax: 206-766-5680; e-mail: [me.boecom@boeing.com](mailto:me.boecom@boeing.com); Internet: <https://www.myboeingfleet.com>. You may review copies of the referenced service information at the FAA, Transport Airplane

Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on December 9, 2011.

Ali Bahrami,  
Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

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